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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,357

03/23/2006

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101046.0001US

9449

24392 7590 05/19/2009

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EXAMINER

MAUST, TIMOTHY LEWIS

ART UNIT

PAPER NUMBER

3751

MAIL DATE

DELIVERY MODE

05/19/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Claims 1-10, 12, 13 and 15-22 are pending.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the overlapping leaves must be shown or the feature(s) canceled from claims 1 and 16. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 12, 13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown et al.

Regarding claims 1-5 and 8, the Brown et al. reference discloses a nozzle (20), a donut shaped diaphragm valve (3) bowed in the upstream direction (see Figures 7-13) that responds by opening due to a predetermined discharge pressure and closes when the pressure ceases, and a multi-branched opening having four branches (57; see Figure 4). Brown fails to disclose having the multiple overlapping leaves. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ overlapping leaves on the Brown et al. device (absent criticality), since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70. Further, arranging the leaves in a side-by-side orientation or in an overlapping orientation is a matter of design choice, since the valve is constructed to remain closed up to a predetermined pressure.

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In regard to claims 6 and 7, see column 7, lines 17-26.

In regard to claims 12 and 15, inasmuch structure that is defined by an installation frame, flange (4; see Figure 6) meets the claim limitation.

In regard to claim 13, see Figures 7-16 showing the valve being positioned "normal" to the spout.

In regard to claim 1, the introductory statement of intended use and all other functional statements have been carefully considered but are deemed not to impose any structural limitations on the claims distinguishable over the Brown et al. device which is further capable of dispensing fuel. Whether the device was actually used in such a manner is dependent upon the performance or non-performance of a future act of use and not upon a particular structural relationship set forth in the claims.

Claims 1-6, 8-10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Derving in view of Brown et al..

In regard to claims 1, 5 and 13, the Derving reference discloses a nozzle (Figure 1) having a spout (1) through which a fuel (i.e., milk is a "fuel" for humans) flows from an upstream to a downstream direction, comprising: a shutoff valve (3); a diaphragm (5) positioned downstream of the shutoff valve, and having a multi-branched opening (16) to form a pressure-activated valve that seals a lumen of the spout against flow of the fuel; and wherein the diaphragm is responsive to fuel pressure in the spout (see column 3, lines 65-68).

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In regard to claims 2-4, wherein the diaphragm is circumferentially coupled to the spout, is non-planar and has at least four branches (see col. 3, lines 24-36).

In regard to claims 6 and 7, wherein the diaphragm comprises a continuous piece of a polymer (see col. 3, lines 41-44).

In regard to claim 8, wherein the diaphragm is positioned such that there is substantially no dead space between the diaphragm and the end of the spout (see the positioning of diaphragm (5) and the outlet (4) in Figure 1).

Derving doesn't disclose a bowed diaphragm biased closed in the upstream direction or overlapping leaves. However, the Brown et al. reference discloses another dispenser having a nozzle (20) and a donut shaped diaphragm valve (3) bowed in the upstream direction (see Figures 7-13) that responds by opening due to a predetermined discharge pressure and closes when the pressure ceases. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the Brown et al. diaphragm for the Derving valve, wherein so doing would amount to mere substitution of one functional equivalent shut-off valve for another within the same art and the selection of any of these shut-off valves would work equally well in the Derving device. Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ overlapping leaves on the Brown et al. device (absent criticality), since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70.

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In regard to claims 9 and 10, the Brown reference or the Derving reference as modified by the Brown et al. reference discloses the invention substantially as claimed (discussed supra), but don't disclose the flexibility of the diaphragm to travel a certain distance or open a certain amount. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a valve that travels a specified distance (0.25 cm or 2 cm), since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617F 2d 272, 205 USPQ 215 (CCPA 1980).

Claims 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al.

Regarding claims 16, 20 and 22, the Brown et al. Reference discloses the invention substantially as claimed (discussed supra), but isn't explicit as to the predetermined pressure needed to open the diaphragm valve being less than 1.5 atmospheres. It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the diaphragm valve of the Brown et al. device to open at less than 1.5 atmospheres of pressure, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617F 2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 17, see flange (4) in Figure 6.

Regarding claim 18, the diaphragm is positioned near the end of the spout as seen in the Figures.

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Regarding claim 19, see branches (57) in Figure 4.

Regarding claim 21, see column 7, lines 17-26.

In regard to claim 16, the introductory statement of intended use and all other functional statements have been carefully considered but are deemed not to impose any structural limitations on the claims distinguishable over the Brown et al. device which is further capable of being used as a valve in a spout of an automotive fuel dispensing nozzle. Whether device was actually used in such a manner is dependent upon the performance or non-performance of a future act of use and not upon a particular structural relationship set forth in the claims.

Response to Arguments

Applicant's arguments with respect to the above claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Maust whose telephone number is (571) 272-4891. The examiner can normally be reached on Mon. - Thur. 7:00-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4883. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Timothy L Maust/
Primary Examiner
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